During the four-year period from January 1958 to December 1962 20 cases of tetanus occurred in injured patients who had received treatment at this casualty department.

The frequency of tetanus was highest when the use of anti-tetanus serum was almost completely replaced by prophylaxis with penicillin.

The limitations of penicillin in the prevention of tetanus are discussed.

It is suggested that a study should be carried out to compare the effectiveness of long-acting penicillin with that of tetanus antitoxic serum in the prevention of tetanus.

We would like to thank the staff of the Medical Records Office and the Pharmacy Department for their kind co-operation. We are also grateful to the staff of the Casualty Department.

ADDENDUM.—Since submitting this paper our attention has been drawn to a statement by R. L. Batten (Batten, 1965). His impression, based on the same material but admittedly without analysis of the data, was that following the withdrawal of A.T.S. "there was no increase in the number of cases and that those that did develop the disease had it in a milder form." The results of this study show these impressions to have been erroneous.

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Self-poisoning*—Part II

NEIL KESSEL,† M.D., M.R.C.P., M.R.C.P.ED., D.P.M.

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We have discussed the social setting of people involved in self-poisoning acts and the methods they employed. In exploring their personal characteristics and their motives we began by considering diagnosis. I make no apology for thus entering the clinical arena; to influence the public health we have to understand the private illness. I shall, however, concentrate on those aspects of the personal situation which will provide guides to prevention and to management.

Distress

Is there a unifying basis to self-poisoning acts? Is there some feature that informs them all? The answer has already been hinted at. Distress drives people to self-poisoning acts: distress and despair, unhappiness and desperation. It may arise from within, from a morbid appreciation that the patient has of himself in the world; such is the person with a depressive illness. Often it is generated from outside, from the intolerable yet insoluble social situation in which he is caught; that is why so many patients cannot be classed as ill. Sometimes it springs from both sources. Nobody takes poison, a little or a lot, to live or to die, unless at that moment he is distressed beyond what he can bear and so desperate that he cannot see a more rational solution. He does not think that no solution exists, but he cannot himself find it. The suicide says, in effect, "There is no way out," but people who poison themselves are saying, "I cannot see a way out." They find themselves trapped. They are desperate; and their distress drives them to an action that is both stupid and, at the same time, a blow for liberation, to an action that is both senseless and purposeful. We must respect the conjunction of these epithets. Almost always the patients can. Many of them did even as they were taking the tablets.

A married woman of 27 whose husband was threatening to leave her took 50 aspirins: "I didn't think they'd kill me. I thought they might. I hoped they wouldn't. I thought of my mother and father. I couldn't let them be hurt. I hoped really it would bring John back. If it didn't I might as well die."

Senseless and purposeful—it is a paradox that we have to accept.

Motive

The sorts of predicaments which cause people such distress are legion. "Every unhappy family is unhappy in its own particular way." Yet some generalizations can be made. Some patients referred the drama to something wrong within themselves (Table X). It was, they thought, their feelings about the world that were faulty; however, such notions were by no means always accompanied by self-blame. Others explicitly incriminated bad relationships with someone else—generally, if they were married, the spouse. Although they recognized that it takes two to quarrel, they inclined to reproach the other more than themselves. Very often they were right. Not many mentioned material circumstances—debt or unemployment, for instance—and very few indeed held them to be the only factors at work. Broadly speaking our assessment of these factors corresponded with the patients' views.

We noted one phenomenon over and over again. An insensitive spouse, generally the husband, although he cared for his wife had failed to notice either her need for emotional support

TABLE X.—*Motives for Self-poisoning*

	Males (163)	Females (348)
*Troubled relationships with other people ..	39% (51%)	59% (65%)
*Distress arising from within	45% (66%)	37% (49%)
*Material problems (money, housing, etc.) ..	15% (18%)	14% (16%)
"No reason" or "don't know"	23%	16%

* These factors are not exclusive of each other.
Figures in parentheses are the clinical assessments based on interviews with relatives as well as with patients.

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† From the Medical Research Council Unit for Research on the Epidemiology of Psychiatric Illness, University of Edinburgh. Now Professor of Psychiatry, Manchester University. Present address: University Department of Psychiatry, Gaskell House, Swinton Grove, Manchester 13.

and encouragement or the growing sense of isolation within the home that stemmed from their lack. Both the desperate action she took and the consequential action we took at the time of crisis to get this across to the husband were important in ameliorating an unhappy state of affairs that need never have arisen. In our follow-up study we found the outcome of such cases to have been the most satisfactory.

Physical ill-health, rather surprisingly, was rarely mentioned by patients, though frequently present both as acute illness and as chronic disability. Many of the conditions we encountered were not severe, but none was negligible. Almost always the patient was aware of his illness and complained of it, yet he did not relate it to his having poisoned himself. Nevertheless the debilitating effect, or the handicap, probably contributed to the patient's state of mind.

The immediate spark to many acts was a quarrel. Where a good relationship exists between two people a quarrel, however bitter, however violent, does not provoke either party to taking poison, but where the relationship is bad this is often the impetuous result.

Impulsiveness

Two-thirds of all acts were impulsive (Table XI). This astonishing finding is of the utmost importance. Five minutes, sometimes only one minute, before the act took place the idea of taking poison was not in the person's mind. He may have, he often had, thought about doing it in the past. Hours of rumination may have preceded the determination which was formed in a single moment. But in the event, at the event, a feeling of despair arose, often suddenly, from a trivial cause, and was as suddenly acted upon. It was no culmination of a gathering plan. "Why did you do it?" the patients are asked. "I don't know; it just came over me," they reply. And they do not know. It is not that they have forgotten. They are not prevaricating. They never worked it out. They never had a period when they were intending to do it. It just came over them.

TABLE XI.—*Impulsiveness and Age*

	Teen-age (65)	20–34 (196)	35–54 (172)	55+ (69)
Percentage of acts that were impulsive	71	71	63	58

A 30-year-old woman, who had long endured an unhappy marriage to an aggressive ne'er-do-well, related how one day they had a protracted quarrel. There was violence and she collapsed, crying, in an armchair. What was she to do? While she was weeping she remembered that a little while earlier a bottle of sleeping tablets had slipped down the back of the chair and she had never retrieved it. She reached down her hand, found the bottle, and took 20 Seconal capsules.

We could multiply that case over three hundred times with similar impulsive instances. Men and women acted impulsively in equal proportions. Impulsive acts were not related to alcoholism and were no more common among the inebriated than among the others. They had little bearing on the method adopted. Impulsiveness was more common than premeditation at all ages, though its incidence was rather less in women of 55 and over, because of an increase in depressive illness in this group. Patients with formal psychiatric illnesses premeditated self-poisoning more often than did others, but even among them impulsiveness characterized just over half the acts. Impulsive acts were less life-endangering than premeditated ones (Table XII). Still 16% of them had a predictable outcome of death.

TABLE XII.—*Impulsiveness and Index of Endangering Life*

Predictable Outcome	Impulsive Acts (333)	Premeditated Acts (169)
Death	16%	27%
Death probable	10%	14%
Death unlikely	23%	24%
Certain to survive	52%	35%

$\chi^2 = 16{\cdot}27$. 3 degrees of freedom. $P < 0{\cdot}01$.
There were no differences between the sexes.

People who act impulsively have a chance to seek aid immediately afterwards. Premeditation on the other hand carries with it the opportunity to warn someone in advance (Table XIII). Nearly everybody who had premeditated the act had done so, for the most part very recently. The young woman who took the aspirins told her husband that she was thinking of taking her life. He did not take her seriously. Unfortunately that is commonly the case.

TABLE XIII.—*Prior Indication of Intention. This was Given in Connexion with 175 Acts (34%)*

Timing		Appreciation and Action	
On the day	46%	Not noticed	17%
1–7 days before	16%	Noticed but ignored	62%
8–30 days before	6%	Noticed and some action taken	21%
More than a month before	32%		

There were no differences between the sexes.

Such warnings are part of the "appeal" quality of self-poisoning acts. Stengel, who more than anyone else has been responsible for focusing attention on this important aspect, has urged that the appeal is usually unconscious (Stengel and Cook, 1958). Among our patients, however, it was common to find that it was quite conscious.

A rigid, respectable, intolerant, middle-aged man, whose wife had left him suddenly a month earlier, took about 25 aspirin tablets. "To tell you the truth, it was exhibitionism, really. I thought it might arouse her sympathy. I'd tried everything—letters, flowers, nylons, the minister, a lawyer—so I thought I'd try this. To be very truthful, I made inquiries as to the fatal dose. Of course I didn't do so directly. I went to the chemist and said, 'We've been arguing in the canteen about the number of aspirin you'd need.' He said that about 40 would probably be fatal. So I took between 25 and 30." I asked him why he had not taken 40 and the answer was immediate: "Self-preservation. Life's too sweet."

Such patients are often condemned as frankly manipulative, and therefore somehow undeserving. When the purpose is so apparent the distress and the despair are less obvious. But they are there. This man was so disturbed that a month later he had to be legally restrained from continually molesting his wife to secure her return.

Others achieve their purpose. Admission to the ward, having poisoned oneself, can be for instance a powerful weapon in bringing back errant boy friends. The girls who resort to it are, all the same, very much distressed; in their despair they do something stupid and senseless, and it works. Should we judge them harshly on that score? Perhaps what we most resent is that, though there was probably a negligible risk to life, they are held by their circle of friends narrowly to have escaped death. They have had their drama; to us it only means work. But we can hardly expect our patients to have borne that in mind.

Statement of Intention

Once they had recovered, 60% of the patients claimed that they were intending to die, while a quarter said categorically that this was not their purpose. The rest either did not know or were evasive. Little credence can be placed on these statements. The patients did not express them with conviction. They were not true recollections. The intention is not usually worked out at all, let alone with such precision in terms of living and dying. Between those who said that they had intended to die and those who said they had not there was some, but little, difference in the degree to which they had endangered their lives. We find it more profitable to emphasize with the patient any constructive purpose there may have been in his act than to stress the destructive element, which in any case

is evanescent. Very few patients, and they were almost all severely depressed, said after physical recovery that they still wished to take their lives.

Prevention

Since the outcome of self-poisoning acts is often beneficial, ought we to try to prevent them? Such an argument cannot be countenanced. It is not the result of the self-poisoning which produces the benefit but the disclosure and solution of the underlying problem, and there are certainly better and safer ways to bring these problems to light. Self-poisoning is a dangerous practice. Some people kill themselves by it by accident, or perhaps by design. Resuscitation is difficult and time-consuming. It should be possible for people to secure at a smaller price the psychiatric and social help required.

We have looked so far at the face which self-poisoning presents to the patient. The professional worker views it differently. To the general physician it is a medical nuisance; he knows that it involves his staff and himself in considerable work and considerable worry in dealing with the effects of what does not seem to be illness at all. To the psychiatrist it presents a perplexing problem chiefly because of the disparity between the gravity of the situation and the paucity of the clinical findings. To the social strategist it is a setback and a challenge, one more piece of evidence of the malaise generated by bad social conditions. Everyone would like to see self-poisoning prevented.

We cannot alter the disturbed backgrounds from which the patients come. We do not have the means to lessen parental separation or to reduce adverse life experiences and the bad social circumstances in which so many of these patients live. There are many pressing reasons for doing all these things, but the action required is political and not medical. All we may do is to add the knowledge that these conditions generate self-poisoning to the weight of the indictment against such conditions and our voices to the swell of protest against their continued existence.

In the narrower context of the family setting, however, we may be less important. The majority of self-poisoning acts arise from strains within that setting; hence the importance of the fact that so many of the patients, and of their spouses too, relate the act to interpersonal difficulties; hence the importance of the finding that so many patients had no psychiatric illness. If the act has a constructive component in drawing the attention of an insensitive spouse to the emotional needs of the other, then surely it is possible to find less painful ways of bringing this about. And if this is accepted as a medical problem and a medical responsibility (it need not be, but if it is so accepted), then the person to shoulder it is the general practitioner in his chosen role of family doctor. For this, as nothing else, is doctoring the family.

Unlimited Sale of Aspirins

Certain preventive measures are suggested by our study of the means adopted, bearing in mind that two-thirds of the acts were carried out impulsively. Consider first the sale of salicylates. No one would wish to see aspirin available only on prescription, but it is not necessary for it to be sold in lethal quantities without any check on the reason why it is being purchased. Aspirin in large amounts is a dangerous preparation with a measurable mortality rate from overdosage. Untrained and unlicensed people must be stopped from selling it in such quantities. Its sale outside of pharmacies—in grocer's shops and public houses, for instance—should be restricted to packets of half a dozen tablets for emergency use. Only chemists should be allowed to sell more than that and they must be advised to exercise some discretion over its sale, particularly to young people. At present they do not do so. It is commonly sold by junior assistants without any regard to its dangers, and the pharmacist himself may do the same.

We sent a girl (Fig. 5) sobbing into six chemist shops within a mile of each other in Edinburgh. In each she said: "May I buy 200 aspirins, please?" There could have been no economic motive for purchasing such a quantity, for the largest bottle contained only 100 tablets. Nowhere was she refused, whether she was served by an assistant or by the manager. Only once was any concern expressed: "Two hundred? Are you all right? You ought to go and have a cup of tea," though she received several curious glances and was watched through the window as she left more than one shop. A distraught-looking girl, 200 aspirins asked for, curiosity and interest, but no hesitation about the sale. This is irresponsible. The pharmacist, who knows of the dangers of salicylates, should personally supervise their sale and should discourage purchases of more than 25 at a time. Indeed, there is no good reason why bottles of more than 50 tablets should be available at all. Anyone could of course go from shop to shop, but that allows time for the impulse to wear off.

FIG. 5.—This distraught-looking girl was sold large quantities of aspirin.

Control of the sale of aspirins by chemists and others could be achieved very simply. But it is only a small part of the problem. The majority of the poisons taken were obtained on prescription. Fig. 6 shows the changing pattern over the years. That the cross-over occurred soon after the beginning of the National Health Service may be no more than coincidence. But certainly in the matter of methods the physician leads, the layman follows.

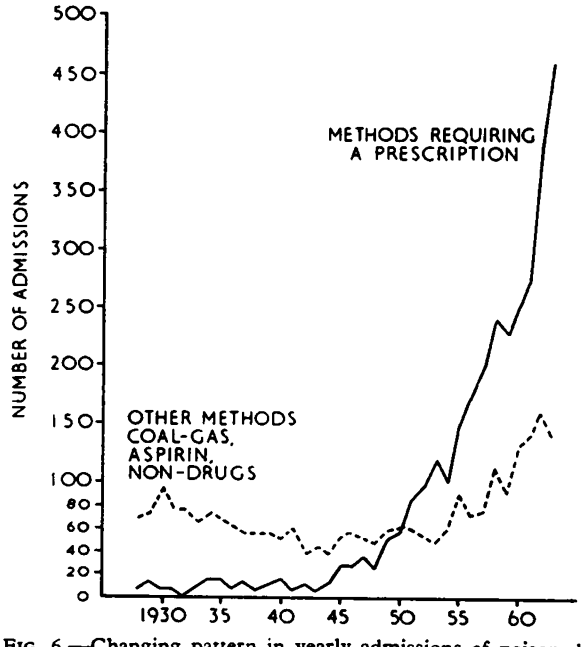

FIG. 6.—Changing pattern in yearly admissions of poisoned patients, 1928–62.

Excessive Prescribing

To anyone who works in a centre for the treatment of poisoning the conclusion is inescapable that dangerous sub-

stances are prescribed unnecessarily often and in excessive quantities. To afford a patient sleep is praiseworthy but unfortunately it is not possible to do this without at the same time possessing him of the means to produce unconsciousness and even death. If the insomnia is a symptom of a depressive illness the gloom-ridden patient may interpret the piece of prescription paper as a licence to poison himself. Several of our patients recounted their surprise that sleeping tablets were prescribed so readily. The growing frequency of self-poisoning acts makes it imperative to use the utmost circumspection in the prescription of barbiturates. The average number of tablets ordered on a single prescription in 1959 was, according to a survey reported by Brooke and Glatt (1964): phenobarbitone, 60 ; Soneryl, 44 ; Amytal, 49 ; Nembutal, 40 ; Drinamyl, 48. These were the average quantities ; some prescriptions were for amounts greatly in excess of these. It is difficult to credit that all this barbiturate was really necessary.

There is, too, the growing popularity of drugs for the mental state. The practitioner, with the assistance sometimes of the psychiatrist, has a double encouragement to prescribe considerable quantities to just those patients who are most likely to indulge in overdosage. For if the tablets work, then he continues to order them, and if they do not, and the patient's symptoms continue, the doctor perseveres, if not with the same drug with a similar one. Often it is the patient who first decides to desist. Finding he is not being helped he gives up taking the tablets, and so they accumulate in his home, waiting. After an episode of illness is over supplies of every kind of tablet customarily remain in the house ; in a moment of crisis they are there, an irresistible temptation. The greatest single public health measure that could be taken to reduce the extent of self-poisoning in Britain would cost nothing at all. It would be for every doctor during the next few months, whenever he visits a patient's house, to empty away the excess stocks of drugs that he finds there. He would meet little opposition from his patients. Often they are ignorant that they hold such a lethal supply. It is only at a time of sudden despair that a search is made, the bottle is found, and the tablets are taken.

Cut off from a supply of drugs would patients resort to more dangerous or more violent action—gassing themselves, swallowing corrosives, slashing their wrists, or jumping from heights ? I do not think this likely. Few self-poisoning patients want to damage themselves irreparably. They would probably seek another way of getting the help they desperately claim. Almost certainly it would be a healthier way.

Alcoholism and Recidivism

One of the common clinical characteristics, certainly of male self-poisoners, is the factor of alcoholism. Alcoholics take poison because they are depressed and desperate, because they are cut off from support and care. If proper facilities for the treatment of alcoholism were provided, and alcoholics were accorded the dignity of being regarded as ill and in need of treatment, fewer might be driven to self-poisoning and indeed to suicide.

Of our series of patients 15% were admitted again within a 12-month period. The problem of recidivism in self-poisoning acts is closely bound up with the presence of personality disorder. Such patients are likely to adopt this pattern of behaviour over and over again when they become depressed and have no other outlet. In our service we try to cope with this situation by offering them the opportunity to call on our help when they need it, without feeling that they have to take an overdose in order to secure attention. Sometimes this necessitates the immediate admission of a patient who is only threatening to take tablets. This is a duty which the psychiatric services should accept. If they were to do so I am convinced that the number of repeated self-poisoning acts would decline. At present it can be difficult to secure the emergency admission to a psychiatric hospital of patients with personality abnormalities who become suddenly, but not severely, depressed. They consequently obtain their necessary removal from the acute situation by taking an overdose and getting a hospital bed in this way. An emergency psychiatric admission is safer and cheaper than an emergency admission to a centre for the treatment of poisoning.

Management

Prevention is best. But cases will continue to arrive in large numbers at our hospitals and we have to deal with them. The patients we have been considering had all been brought to hospital, but we know that there are many other instances which are handled without that recourse. Our rates, high as they are, are necessarily underestimates of the total problem of self-poisoning. They are available in Edinburgh because we studied every case coming to hospital. There is little reason to believe that similar rates would not be found elsewhere. Both alcoholism and unemployment are more rife in Scotland than in England, and they will have swelled the incidence, but figures of comparable order would almost certainly be revealed in other places if the procedure of automatic admission of every case of self-poisoning arriving at hospital were followed. Admission does not invariably require that the patient spends even one night in hospital. The routine of necessary medical care and of prompt and thorough psychiatric assessment can be performed quickly, but first it must be firmly established. At present it still goes by default in many hospitals.

It is the correct medical approach, because it makes sure that the proper treatment is applied when it is most effective. By striking while the iron is hot the psychiatrist makes sure that the principal figures are most malleable. This is the time when skilful intervention can do most. While the patient is in the ward under our care, generally for one, two, or three days only, he and his relatives receive a lot of attention. We practise, where we think it indicated, what I term " stösspsychotherapy," the management of the patient by administering quickly a massive dose of psychiatric treatment. Such a service, described in detail elsewhere (Kessel *et al.*, 1963), should form an integral part of every unit for the treatment of poisoning, for there is considerable advantage in conducting resuscitation and psychiatric management in the same clinical setting. The time is past when patients should be discharged from in-patient care or, worse, after a brief unpleasant sojourn in the casualty department without a psychiatric assessment. Physicians still do so because of a misconception centred upon, and nurtured by, the term " attempted suicide."

Discussion

I have throughout used the wording " self-poisoning " rather than " attempted suicide," for I consider the latter term to be both clinically inappropriate and misleading. It is true that in the popular mind deliberate self-poisoning is linked, linked indeed romantically, with the idea of suicide. It is true that some of our patients had done all they could to encompass their deaths ; that minority can be said to have failed at suicide. But for four-fifths of the patients the concept of attempting suicide is wide of the mark. They performed their acts in the belief that they were comparatively safe—aware, even in the heat of the moment, that they would survive their overdosage and be able to disclose what they had done in good time to ensure their rescue. What they were attempting was not suicide. Moreover, what they were attempting they commonly achieved. To that end the simulation of death, consciously or not, the hint of suicide, heightened its effectiveness. But the act was not attempted suicide. Doctors do not have to be deceived by their simulation ; the drama was enacted for their own circle only.

If the term "attempted suicide" were just meaningless it could be tolerated, but it is positively wrong and should be discarded. The motives of our patients clearly proclaim this. In the first place the majority of acts were impulsive. Then, too, they were stupid and senseless, and the patients themselves acknowledge this. Not thus does a man drive himself to suicide. Also they demonstrated some purposefulness ; but this purpose was to alter their life situation, not to die.

These patients were not attempting suicide. That term leads to errors of judgment. The chief of these is to measure the need for psychiatric treatment by the yardstick of the physical state of the patient. If he has taken only a small quantity of drugs then he was not really attempting suicide, so the argument time and again runs, he was just making a suicidal gesture which need not be taken seriously. Whether or not the patient receives psychiatric help must not depend upon whether the doctor in the out-patient department thinks the patient is *physically* ill enough to need admission. This doctor will be more impressed by the dozen tablets that the patient has taken than by the threescore that he was prevented from swallowing. The extent of physical damage is no criterion either of the seriousness of psychiatric illness or of the need for psychiatric care (Table XIV). The index of endangering life—our measure of the seriousness of the act—is *not* correlated with the need for psychiatric treatment.

TABLE XIV.—*Index of Endangering Life, and Disposal*

	Predictable Outcome			
	Death	Death Probable	Death Unlikely	Certain to Survive
In-patient psychiatric care (131)	40%	23%	22%	23%
Out-patient psychiatric care (190)	30%	45%	40%	39%
No further psychiatric care (179)	30%	32%	38%	38%

$\chi^2 = 12{\cdot}05$. 6 degrees of freedom. $P > 0{\cdot}05$.

Mistakes occur and result in many tragedies because doctors cling to the notion of attempted suicide. Attempted suicide is not a diagnosis. It is not even a description of behaviour. It is an interpretation of the motives for the act of self-poisoning —an unnecessary and usually a wrong interpretation. The alternative is simple. Everybody who has poisoned himself warrants psychiatric examination. The fact of self-poisoning should be a sufficient criterion for the doctor who sees the patient to decide to obtain a psychiatric assessment. This is much easier for him than to have to try to estimate whether or not the patient positively meant to die. It is easier and more correct, better medicine, and more simple. We should discard the specious concept of attempted suicide. The pattern of clinical practice will then be to ascertain whether self-poisoning has taken place, and, if it has, to arrange, irrespective of the physical state of the patient, that a psychiatric examination is performed before the patient is discharged.

The fashion of self-poisoning will almost certainly be with us and continue to grow for years to come. We cannot afford to miss the point of it by calling it something else.

Conclusion

Deliberate self-poisoning is becoming more and more common and a matter of public health concern. Its management, other than resuscitation, is best achieved by psychiatric methods. The means of self-poisoning are usually provided by physicians, and it is as a general medical problem that the poisoned patient first presents.

I have attempted to illuminate each of these aspects by a clinical and epidemiological study of one year's cases in Edinburgh. This has led to an explanation of the recent rapid rise in incidence and to suggestions for prevention and for management. An understanding of all aspects is necessary to the proper appreciation both of individual patients and, collectively, of an important medical problem.

I would like to thank Dr. J. K. Slater, who was until his retirement physician-in-charge of ward 3 of the Royal Infirmary of Edinburgh, for his encouragement. Dr. Henry Matthew, his successor, has given me a great deal of advice and help as we have thought through problems together. These lectures would be the poorer without the stimulus of his ideas, and I am deeply grateful. I must also thank the medical and nursing staff of the ward for all their assistance. To Mr. W. McCulloch, my psychiatric social work colleague in the Medical Research Council Unit for Research on the Epidemiology of Psychiatric Illness, I owe more than thanks. He has partnered me in this work.

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Diagnosis of Industrial Dermatitis*

F. RAY BETTLEY,† M.D., F.R.C.P.

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The diagnosis of industrial dermatitis may be very easy, particularly when the lesion produced is characteristic, as, for example, the chrome holes which result from exposure to strong solutions of chromic acid. Most cases of industrial dermatitis, however, present an eczematous eruption on the hands or forearms, and in these the diagnosis of industrial dermatitis may be very difficult. It is widely recognized that several different factors—for example, chemical, physical, psychosomatic—may operate together to produce an eczematous eruption, and this is perhaps more true of hand eczema than it is of eczemas affecting other parts of the body.

The diagnosis of industrial dermatitis has such implications that when the physician is confronted with a case of hand eczema the doctor's decision often has more a social, financial, and possibly even political significance than a purely medical one. By the administrator, industrial dermatitis has been defined as dermatitis "due to" this or that industrial factor, but the meaning of the words "due to" is not precisely defined. To us, presumably, industrial dermatitis is a lesion in the complex causation of which the industrial factor constitutes an important or major ingredient, without which the disease would not have occurred. But in many cases the actual extent of the industrial factor can be assessed only by surmise, and whether the eruption would or would not have developed without that factor could only be declared by a clairvoyant.

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† Middlesex Hospital, London.